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ABSTRACTS

MEDICINE

Toxoplasmosis in Children in Styria (Austria).

W. FALK: *Wien. Klin. Wschr.*, 74: 520, 1962.

In recent years the children in the age group 1-14 in the Province of Styria (Austria) were examined for toxoplasmosis by means of the toxoplasmin skin test and the Sabin-Feldman dye test. Of 1022 children over one year of age who were suspected of having toxoplasmosis, it was found that in the older age group some 50% had positive skin tests. A connection between exposure to domestic animals and a higher incidence of positive reaction to toxoplasmin was established. Of 727 children who played with domestic animals 24.48% had positive tests, as against 8.47% in the 295 children without such exposure. For the total group of 1022 children examined the toxoplasmin test was positive in 19.86%. In 206 children who were given the Sabin-Feldman dye test, 34% had a positive result. There was a higher incidence of positive tests in children from rural districts as compared with city dwellers (22% vs. 15.17% for the toxoplasmin test and 37.4% vs. 25.75% for the Sabin-Feldman test). More widespread investigation of the extent of exposure of the Austrian population to toxoplasmosis is urged. W. GROBIN

Involvement of the Back in Reiter's Syndrome. Follow-up Study of Thirty-Four Cases.

A. E. GOOD: *Ann. Int. Med.*, 57: 44, 1962.

Follow-up information is presented for 26 of a series of 34 acute cases of Reiter's syndrome, confirming the close association with ankylosing spondylitis. Pain consistent with sacroiliitis or spondylitis is common during acute Reiter's syndrome. Nearly half of those whose duration of history exceeded two years had definite radiographic evidence of bilateral sacroiliac disease. Ankylosing spondylitis has been diagnosed in eight patients, and several of these have followed a progressive course typical for that of severe ankylosing spondylitis. Rheumatoid arthritis was not documented in this series.

The long-term prognosis would appear to be good, even after multiple acute attacks, in that, of 23 living patients among whom follow-up had been achieved for more than two years after the onset of the disease, 21 were able to work regularly. Only two, however, were free from symptoms referable to continuing rheumatic activity or to residua of previous bone or joint disease.

Studies on Oxidative and Hydrolytic Enzymes in Synovial Membrane of Normal and Arthritic Patients.

P. BARLAND AND D. HAMERMAN: *Bull. N.Y. Acad. Med.*, 38: 507, 1962.

The synovial specimens for this study were obtained from the knees of patients by either open biopsy or closed biopsy, utilizing the Polley-Bickel needle. The specimens were either fixed prior to sectioning in cold formol calcium for 12 to 24 hours, or fixed following sectioning and substrate incubation in 10% neutral formalin for 10 minutes. Methods used for demonstrating oxidative enzyme activities are described. The synovial specimens were also studied for acid phosphatase activity. The fine structure of the lining cells was studied by electron microscopy.

The authors state that this work illustrates the advantages of cytochemical methods. In contrast to hematoxylin and eosin preparations, the structure of lining cells is brought out vividly by tetrazolium procedures. Lysosomes, invisible in H & E preparations, are readily distinguished. These methods also shed more light on metabolic pathways in the cell.

Both the cytochemical findings and electron microscopy are consistent with the view that the lining cells produce the hyaluronate of the synovial fluid. These cells have a high level of oxidative enzyme activity. The appearance of the cytoplasmic vacuoles and the numerous lysosomes suggest active interchange with the external medium.

NEUROLOGY

Some Statistics Regarding Disseminated Sclerosis.

A. B. ROGOVER AND L. E. BRONSTEIN: *Klin. Med. (Moskva)*, 9: 35, 1962 (Russian).

Hospital records for 1945-1959 showed a total of 920 admissions for disseminated sclerosis. In the first five postwar years the rate of admission was considerably higher than usual. This is explained by the authors by the unavailability of hospitals during the war. Another reason was the use of a new treatment, "vaccinotherapy", in the immediate postwar years, which has now been abandoned.

There is no significant difference in the overall incidence between the two sexes. The largest number of patients was in the age group 20-40 years. It appears that up to the age of 31 men are more frequently affected than women, from 31-35 the numbers are equal and after the age of 35 men again predominate. The ataxic form with hyperkinesis is the one that most frequently causes early disability. Remissions were noted in 63% of cases; these usually lasted from several months to one year, less frequently for two to three years and occasionally for five to 10 years. The first remission was usually the longest and their duration decreased after each subsequent recurrence.

W. GROBIN

PUBLIC HEALTH

Clinical, Epidemiological, and Virological Aspects of Echo Virus Type 9 Infection in Sheffield, 1960.

D. HOBSON, J. M. HOSKINS AND J. HORNER: *Brit. J. Prev. Soc. Med.*, 16: 84, 1962.

ECHO virus Type 9 was found in association with a mild nonmeningeal illness of small children accompanied by a rubelliform rash, and in aseptic meningitis affecting older children and adults. There appeared to be little overlap between the two forms of clinical disease. Very few virus isolations were made from other types of illness or from healthy adults. The possibility that many adult illnesses are derived from a reservoir of infection in small children is discussed. There was little evidence of immunization by previous virus exposure in the normal general population. Virus strains isolated from various types of patients appeared to show little difference in laboratory behaviour. The possible role of host factors in the infectivity and virulence of ECHO virus Type 9 is discussed.

(Authors' summary)

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PATHOLOGY

Chromosomes of Sternberg-Reed Cells.

A. I. SPRIGGS AND M. M. BODDINGTON: *Lancet*, 2: 153, 1962.

A case of Hodgkin's disease in which it was possible to examine the chromosomes of Sternberg-Reed cells from a lymph-node biopsy is presented.

Spontaneously occurring malignant tumours usually consist of cells with abnormal karyotypes, each case showing a distinctive pattern. This has been true of all the human carcinomas and sarcomas in which the authors have been able to examine the chromosomes. It is stated that the case of Hodgkin's disease presented is only an isolated one, but if different grossly abnormal karyotypes can be demonstrated in other cases, this will strongly support the view that the Sternberg-Reed cells are malignant cells in the ordinary sense.

It is noted that Kaplan and Smithers have suggested that Hodgkin's disease may represent an immune reaction of altered lymphoid cells against the blood-forming cells of the host. The author states that it seems improbable that the bizarre Sternberg-Reed cells can differentiate into normal-looking lymphocytes, plasma cells or eosinophils, especially if this involves somatic reduction from a higher chromosome number. It is therefore suggested by the authors that the various leukocytes represent a reaction on the part of the host against a particular type of neoplastic cell.

Cerebral Aneurysms and Congenital Abnormalities.

W. E. STEHBENS: *Aust. Ann. Med.*, 11: 102, 1962.

The prevalence of congenital abnormalities in a series of 215 subjects with cerebral aneurysms proved at autopsy was not significantly greater than that in a control series of 849 subjects or in a series of 351 with non-aneurysmal cerebral hemorrhage. Apart from coarctation of the aorta and polycystic kidneys, the incidence was not higher than in the general population.

It was concluded that there is insufficient evidence to support the postulate that the association of cerebral aneurysms and developmental errors is significant. However, cerebral aneurysms frequently occur with polycystic disease of the kidneys and coarctation of the aorta, and these are the only two congenital diseases commonly associated with systemic hypertension. The coexistence of the lesions could be due to the concomitant hypertension and arterial degenerative disease rather than to hypothetical congenital factors.
(Authors' summary)

GENETICS

Chromosome Rearrangements in Apparently Normal Individuals.

D. G. HARNDEN AND J. A. WILLIAMS: *Heredity*, 17: 299, 1962.

Chromosome rearrangements of several types have now been found to be associated with various forms of congenital malformation in man. A number have also been described in apparently normal individuals. In the course of the authors' cytogenetic investigations of patients with leukemia or with another malignant disease, of therapeutically irradiated patients and of the relatives of patients known to have a chromosome abnormality, several instances of chromosome abnormality were encountered which are apparently coincidental. A chromosome rearrangement was found in the brother of a woman with an abnormality of the sex chromosomes. One patient with breast cancer had a constitutional chromosome abnormality; three patients with chronic myeloid leukemia, and possibly a fourth such case, were found to have a chromosome abnormality in addition to the Philadelphia chromosome. Also a very large Y chromosome was noted in a number of cases.

The Genetics of Diabetes: A Study of 233 Families of Juvenile Diabetics.

N. E. SIMPSON: *Ann. Hum. Genet.*, 26: 1, 1962.

The number of diabetic parents among 374 living parents of juvenile diabetics was no greater than expected for their age (calculated from a population survey). The number of diabetic parents who were less than 40 years of age, however, was greater than that in the population.

A similar comparison of the incidence of diabetes among 535 living sibs of juvenile diabetic propositi showed a tenfold increase of diabetes over that expected, and one diabetic observed among 114 offspring of the propositi was greater than expected.

A preponderance of sibs with an early age at onset was found for those sibs of juvenile diabetic propositi, over that found among sibs of adult propositi.

The data indicate that the predisposition for diabetes at an early age is under genetical influence which is not compatible with the single gene hypotheses of recessive, intermediate or dominant inheritance. Genetic heterogeneity between juvenile and adult diabetes is suggested and discussed. Theories of multiple genes or modifying genes for age at onset together with a single gene for the predisposition of diabetes cannot be distinguished from the data.
(Authors' summary)

Investigation of Family Showing Transmission of a 13-15 Chromosomal Translocation (Denver Classification).

S. WALKER AND R. HARRIS: *Brit. Med. J.*, 2: 25, 1962.

Major chromosomal anomalies are usually associated with considerable clinical defects, and as more human cytogenetic surveys are reported new syndromes are becoming recognizable. Trisomy in particular appears to be associated with discrete clinical entities and in most cases is sporadic in occurrence. However, Penrose *et al.* and subsequently others have indicated a form of familial mongolism with 46 chromosomes instead of the typical 47, and resulting from the transmission of a balanced translocation. Carriers of this translocation have 45 chromosomes but are clinically normal, and can be recognized only by chromosome studies. Such individuals are fertile, and among their offspring are children having 46 chromosomes, including the translocation, who are clinically indistinguishable from mongols, trisomic for chromosome No. 21. These children are thus effectively trisomic.

This paper reports findings of a study of a large family of four generations in which carriers of a translocation between two chromosomes in the 13-15 group were found. Although individuals with a similar translocation have been studied by other workers, no previous reports exist showing familial transmission.